

Title (en)  
ORGANIC LIGHT EMITTING DIODE, DISPLAY PANEL AND DISPLAY APPARATUS HAVING THE SAME, AND FABRICATING METHOD THEREOF

Title (de)  
ORGANISCHE LEUCHTDIODE, ANZEIGETAFEL UND ANZEIGEVORRICHTUNG DAMIT UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
DIODE ÉLECTROLUMINESCENTE ORGANIQUE, PANNEAU D'AFFICHAGE ET APPAREIL D'AFFICHAGE LE COMPRENANT, ET LEUR PROCÉDÉ DE FABRICATION

Publication  
**EP 3520153 A4 20200701 (EN)**

Application  
**EP 16894812 A 20160930**

Priority  
CN 2016101076 W 20160930

Abstract (en)  
[origin: WO2018058524A1] An organic light emitting diode includes a light emitting layer, a first electron transport layer including a first electron transport material on the light emitting layer, a hole scavenger layer including a hole scavenger material on a side of the first electron transport layer distal to the light emitting layer, and a second electron transport layer including a second electron transport material on a side of the hole scavenger layer distal to the first electron transport layer. The hole scavenger material includes a first light emitting material capable of converting excitons generated by excess holes in the first or second electron transport layer to a ground state through radiative decay.

IPC 8 full level  
**H01L 51/52** (2006.01); **H01L 51/56** (2006.01)

CPC (source: EP US)  
**H10K 50/11** (2023.02 - EP US); **H10K 50/12** (2023.02 - US); **H10K 50/131** (2023.02 - EP US); **H10K 50/166** (2023.02 - EP US); **H10K 50/171** (2023.02 - US); **H10K 50/19** (2023.02 - EP); **H10K 59/12** (2023.02 - US); **H10K 71/00** (2023.02 - US); **H10K 59/00** (2023.02 - EP); **H10K 2101/10** (2023.02 - EP US); **H10K 2101/30** (2023.02 - US); **H10K 2101/40** (2023.02 - EP US)

Citation (search report)

- [X] EP 2503617 A2 20120926 - TOSHIBA KK [JP]
- [X] US 2014131674 A1 20140515 - PARK JINHO [KR], et al
- [X] US 2009226757 A1 20090910 - SONG JUNG BAE [KR], et al
- See also references of WO 2018058524A1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**WO 2018058524 A1 20180405**; CN 109417132 A 20190301; CN 109417132 B 20211126; EP 3520153 A1 20190807; EP 3520153 A4 20200701; EP 3520153 B1 20231213; JP 2019530199 A 20191017; JP 7015089 B2 20220202; US 10270053 B2 20190423; US 2018254424 A1 20180906

DOCDB simple family (application)  
**CN 2016101076 W 20160930**; CN 201680000978 A 20160930; EP 16894812 A 20160930; JP 2017550700 A 20160930; US 201615560745 A 20160930